

**ABSTRACT OF THE INVENTION**

**METHODS AND COMPOSITIONS FOR THE GENERATION OF HUMANIZED MICE**

The invention provides methods and compositions for generating non-human transgenic animals that are humanized at one or more gene sequences. According to the methods of the invention, a DNA construct containing a human DNA sequence flanked by sequences from the non-human animal is generated by recombination in a bacterial cell, for example, in *E. coli*. The DNA construct that is produced can then be introduced into a non-human embryogenic stem cell where it can recombine with the genomic DNA of the non-human animal.